

ABSTRACT

An insulating ceramic composition forming insulating ceramic layers (3) stacked in a multilayer ceramic substrate (2) used in a monolithic ceramic electronic component, such as a multilayer ceramic module (1). The insulating ceramic composition contains a first ceramic powder mainly containing forsterite, a second ceramic powder mainly containing at least one compound selected from the group consisting of  $\text{CaTiO}_3$ ,  $\text{SrTiO}_3$ , and  $\text{TiO}_2$ , and a borosilicate glass powder. The borosilicate glass powder contains 3 to 15 percent by weight of lithium in terms of  $\text{Li}_2\text{O}$ , 30 to 50 percent by weight of magnesium in terms of  $\text{MgO}$ , 15 to 30 percent by weight of boron in terms of  $\text{B}_2\text{O}_3$ , 10 to 35 percent by weight of silicon in terms of  $\text{SiO}_2$ , 6 to 20 percent by weight of zinc in terms of  $\text{ZnO}$ , and 0 to 15 percent by weight of aluminum in terms of  $\text{Al}_2\text{O}_3$ . The insulating ceramic composition can be fired at a temperature of  $1000^\circ\text{C}$  or less, and the resulting sintered compact has a low relative dielectric constant, a resonance frequency with a low temperature coefficient, and a high Q value.